

Lésions occlusives aorto-iliaques : Quelle stratégie chez le claudicant ?

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INTRODUCTION

- Traitement chirurgical (direct ou endo.)
- Indications larges ($\neq$ fémoro-pop.)

Le traitement chirurgical

- Les options chirurgicales directes
 - Pontage aorto-bi-fémoral
 - Pontage ilio-fémoral

Durable
Morbi-mortalité significative
- Les options chirurgicales indirectes
 - Pontage axillo-fémoral
 - Pontage fémoro-fémoral croisé

Moins durable
Morbi-mortalité faible
- Les options endovasculaires
 - Elles ont pris le pas sur la chirurgie ces dernières années, même pour les lésions complexes

Recommendation 36

Treatment of aortoiliac lesions

- TASC A and D lesions: Endovascular therapy is the treatment of choice for type A lesions and surgery is the treatment of choice for type D lesions [C].
- TASC B and C lesions: Endovascular treatment is the preferred treatment for type B lesions and surgery is the preferred treatment for good-risk patients with type C lesions. The patient's co-morbidities, fully informed patient preference and the local operator's long-term success rates must be considered when making treatment recommendations for type B and type C lesions [C].

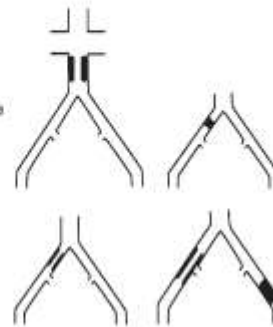
Type A

- Unilateral or bilateral stenoses of CIA
- Unilateral or bilateral single short (≤ 3 cm) stenosis of EIA



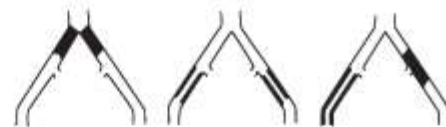
Type B

- Short (≤ 5 cm) stenosis of infrarenal aorta
- Unilateral CIA occlusion
- Single or multiple stenosis totaling 3–10 cm involving the EIA not extending into the CFA
- Unilateral EIA occlusion not involving the origins of internal iliac or CFA



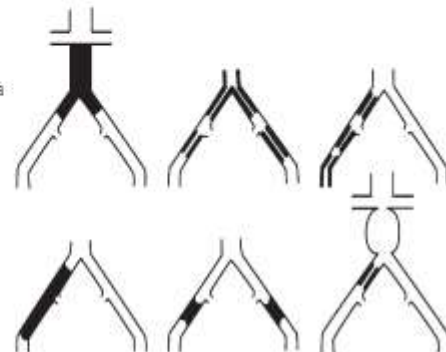
Type C

- Bilateral CIA occlusions
- Bilateral EIA stenoses 3–10 cm long not extending into the CFA
- Unilateral EIA stenosis extending into the CFA
- Unilateral EIA occlusion that involves the origins of internal iliac and/or CFA
- Heavily calcified unilateral EIA occlusion with or without involvement of origins of internal iliac and/or CFA



Type D

- Infra-renal aortoiliac occlusion
- Diffuse disease involving the aorta and both iliac arteries requiring treatment
- Diffuse multiple stenoses involving the unilateral CIA, EIA, and CFA
- Unilateral occlusions of both CIA and EIA
- Bilateral occlusions of EIA
- Iliac stenoses in patients with AAA requiring treatment and not amenable to endograft placement or other lesions requiring open aortic or iliac surgery



Endovascular management of iliac artery occlusions: extending treatment to TransAtlantic Inter-Society Consensus class C and D patients

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<i>Variable</i>	<i>No. Patients</i>	<i>Critical ischemia, %</i>	<i>Recanalization success, %</i>	<i>Primary patency at 3 y (%)</i>	<i>Secondary patency at 3 y (%)</i>	<i>Limb salvage at 3 y (%)</i>
TASC-B*	22	20%	95	78	95	100
TASC-C	30	56%	94	73	93	97
TASC-D	37	50%	86	80	83	95
Total	89	45%	91	76	90	97

A liberal posture to open femoral artery reconstruction extends the ability to treat diffuse TASC-C and -D lesions via endovascular means.

Methods: The Medline, Embase, and Cochrane databases were searched to identify all studies reporting endovascular treatment of extensive AIOD (TransAtlantic Inter-Society Consensus (TASC) type C and D) from January 2000 to June 2009. Two independent observers selected studies for inclusion, assessed the methodologic quality of the included studies, and performed the data extraction. Outcomes were technical success, clinical success, mortality, complications, long-term primary, and secondary patency rates.

Results: Nineteen nonrandomized cohort studies reporting on 1711 patients were included. There was substantial clinical heterogeneity between the studies considering study population and interventional techniques. Technical success was achieved in 86% to 100% of the patients. Clinical symptoms improved in 83% to 100%. Mortality was described in seven studies and ranged from 1.2% to 6.7%. Complications were reported in 3% to 45% of the patients. Most common complications were distal embolization, access site hematomas, pseudoaneurysms, arterial ruptures, and arterial dissections. The majority of complications could be treated using percutaneous or noninvasive techniques. Four- or 5-year primary and secondary patency rates ranged from 60% to 86% and 80% to 98%, respectively.

Conclusions: Endovascular treatment of extensive AIOD can be performed successfully by experienced interventionists in selected patients. Although primary patency rates are lower than those reported for surgical revascularization, reinterventions can often be performed percutaneously, with secondary patency comparable to surgical repair. (J Vasc Surg 2010;52:1376-83.)

A systematic review of endovascular treatment of extensive aortoiliac occlusive disease

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Willem Wisselink, MD,^b *Hoofddorp and Amsterdam, The Netherlands*

J Vasc Surg 2010;52:1376-83

Early and late outcomes of percutaneous treatment of TransAtlantic Inter-Society Consensus class C and D aorto-iliac lesions

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Objectives: The aim of this study was to analyze the technical success and long-term patency of the endovascular treatment of TransAtlantic Inter-Society Consensus (TASC) C and D aorto-iliac arterial lesions.

Methods: All studies reporting original series of patients published in English between 2000 and 2010 were enrolled into meta-analysis. Separate meta-analyses were performed for groups with immediate technical success, 12-month patency, and long-term outcomes. Subgroup analyses were performed to determine if there were differences in outcomes between patients with varying types of lesions (TASC C or D lesions) or between different stenting strategies, including primary or selective stenting.

Results: Sixteen articles consisting of 958 patients were enrolled in this meta-analysis. The pooled estimate for technical success was 92.8% (95% confidence interval [CI], 89.8%-95.0%, 749 cases). Primary patency at 12 months was 88.7% (95% CI, 85.9%-91.0%, 787 cases). Subgroup analyses demonstrated a technical success rate of 93.7% (95% CI, 88.9%-96.5%) and a 12-month primary patency rate of 89.6% (95% CI, 84.8%-93.0%) for TASC C lesions. For TASC D lesions, these rates were 90.1% (95% CI, 76.6%-96.2%) and 87.3% (95% CI, 82.5%-90.9%), respectively. The technical success and 12-month primary patency rates for primary stenting were 94.2% (95% CI, 91.8%-95.9%) and 92.1% (95% CI, 89.0%-94.3%), respectively; for selective stenting, these rates were 88.0% (95% CI, 67.9%-96.2%) and 82.9% (95% CI, 72.2%-90.0%), respectively. The long-term, primary patency rates for patients receiving primary stenting were significantly better than those receiving selective stenting. Publication bias was not significant for these analyses.

Conclusions: This study demonstrates that early and midterm outcomes of endovascular treatment for TASC C and D aorto-iliac lesions were acceptable, with a better patency for primary stenting than selective stenting. (J Vasc Surg 2011; 53:1728-37.)

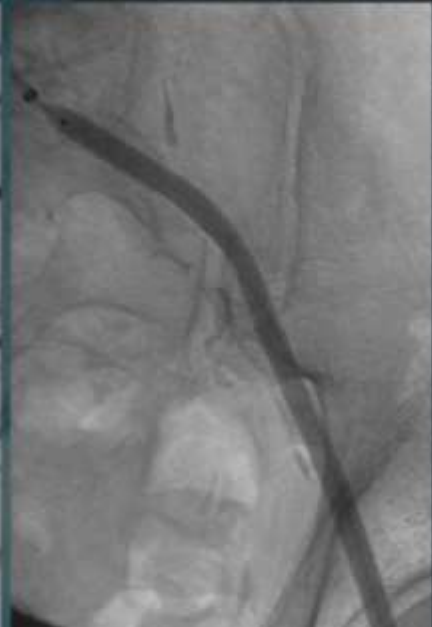
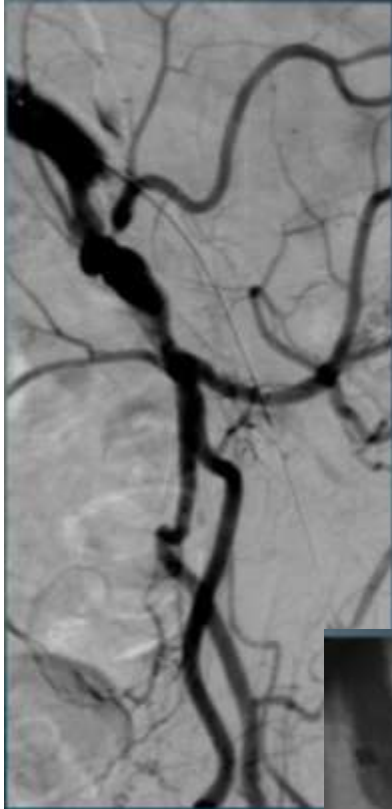
Techniques endovasculaires

- Voie d'abord
 - Fémorale, rétrograde ou cross-over
 - Humérale antérograde
 - Combinées, pour le franchissement antérograde des occlusions
- Le stenting primaire, la norme (lésions complexes ++)
- Stents
 - Montés sur ballon, ou auto-expansibles en nitinol
 - non couvert, ou couvert
- Les stents doivent être mesurés au préalable sur le scanner (sizing)
 - Sous dimensionnées en cas de calcifications sévères

Les Stents Couverts



- Ils semblent avoir une meilleure perméabilité pour le traitement des lésions complexes comparé au stent non couvert
 - Dans certaines études mono-centriques
 - RCT COBEST
- Sécurité pour les lésions très calcifiées (rupture)



Outcomes of covered versus bare-metal balloon-expandable stents for aortoiliac occlusive disease

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J Vasc Surg 2014;60:337-44

Increasing efficacy of endovascular recanalization with covered stent graft for TransAtlantic Inter-Society Consensus II D aortoiliac complex occlusion

Daniele Psacharopulo, MD,^a Emanuele Ferrero, MD,^a Michelangelo Ferri, MD,^a Andrea Viazzo, MD,^a Sandeep Singh Bahia, MBBS,^b Andrea Trucco, MD,^a Fulvio Ricceri, MD,^c and Franco Nesi, MD,^a *Turin, Italy; and London, United Kingdom*

J Vasc Surg 2015;62:1219-26

Outcomes of polytetrafluoroethylene-covered stent versus bare-metal stent in the primary treatment of severe iliac artery obstructive lesions

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J Vasc Surg 2015;62:1210-8



COBEST

covered versus balloon expandable stent

Groupe advanta V12 (n=83)

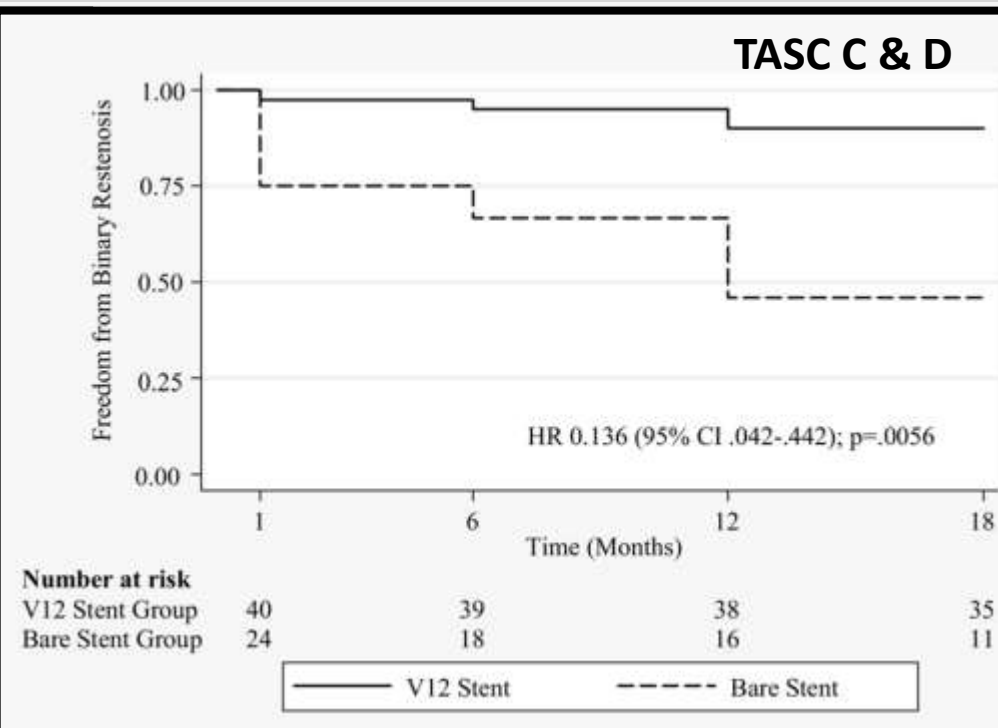
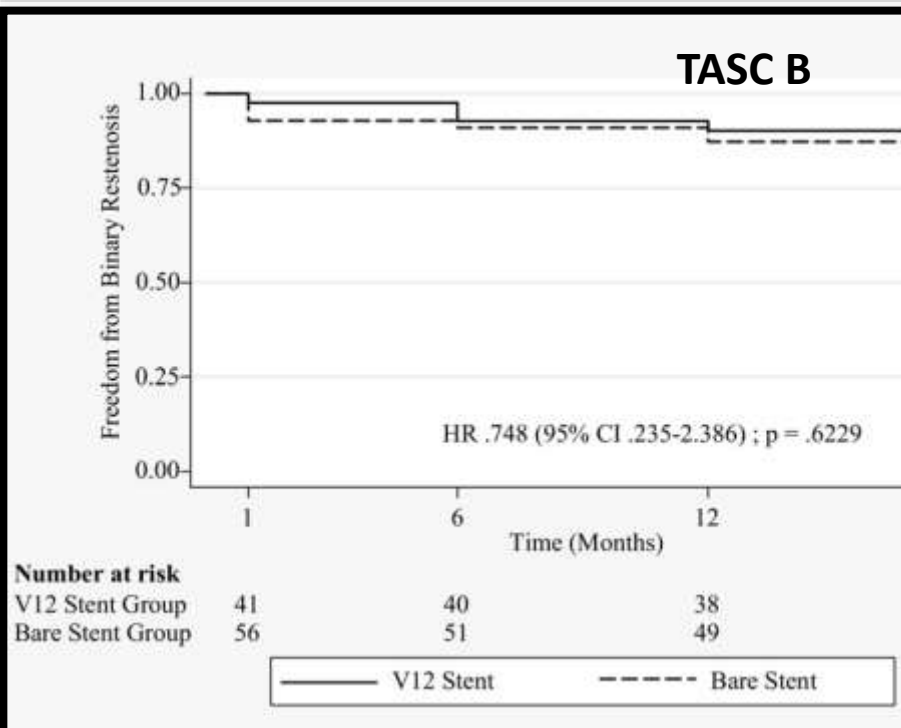
VS

**Groupe stent non couvert monté sur ballon ou
auto expansible (n=85)**

- Tous les patients traité au long court par aspégic+plavix
- Essai prospectif multicentrique

A comparison of covered vs bare expandable stents for the treatment of aortoiliac occlusive disease

Bibombe P. Mwipatayi, MMed (Surg), FCS (SA), FRACS,^{a,b} Shannon Thomas, MBBS (Hons),^a Jackie Wong, MPH,^a Suzanna E. L. Temple, PhD, MBA,^{a,c} Vikram Vijayan, MRCS, FRCS,^a Mark Jackson, MD, FRACS,^d and Sally A. Burrows, BMath Grad Dip Med Stat,^e on behalf of the Covered Versus Balloon Expandable Stent Trial (COBEST) Co-investigators,* *Perth, Western Australia and Gold Coast, Queensland, Australia*



COBEST: covered and bare-metal stents produce similar and acceptable results for TASC B lesions.
covered stents perform better for TASC C and D lesions

(J Vasc Surg 2011;54:1561-70.)

Stent nu / stent couvert ?

- Lésions TASC A & B
 - Stent couvert = Stent non couvert
- Lésions TASC C & D
 - Stent couvert > stent non couvert
 - Preuves sujettes à caution

Proportion de TASC C et D relativement faible / erreur de Type II

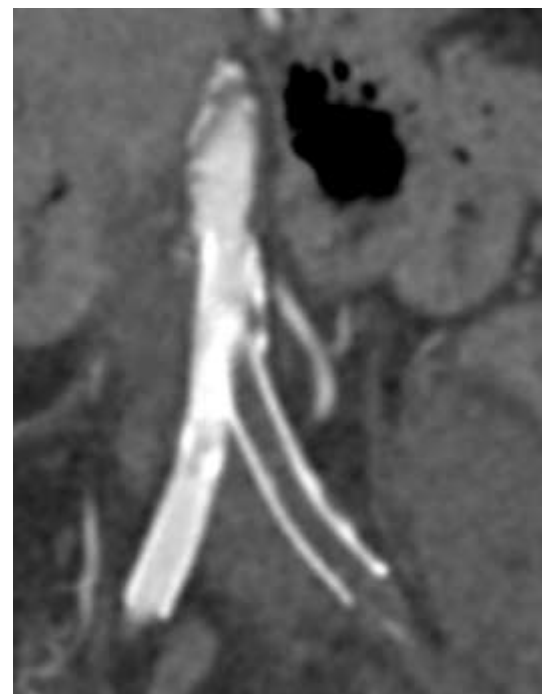
- Adoption en routine ? D'autres études nécessaires
- Preuves suffisantes pour une utilisation circonstanciée (+++)

La Localisation de la Resténose

- Groupe Stent non couvert
 - A l'intérieur du stent

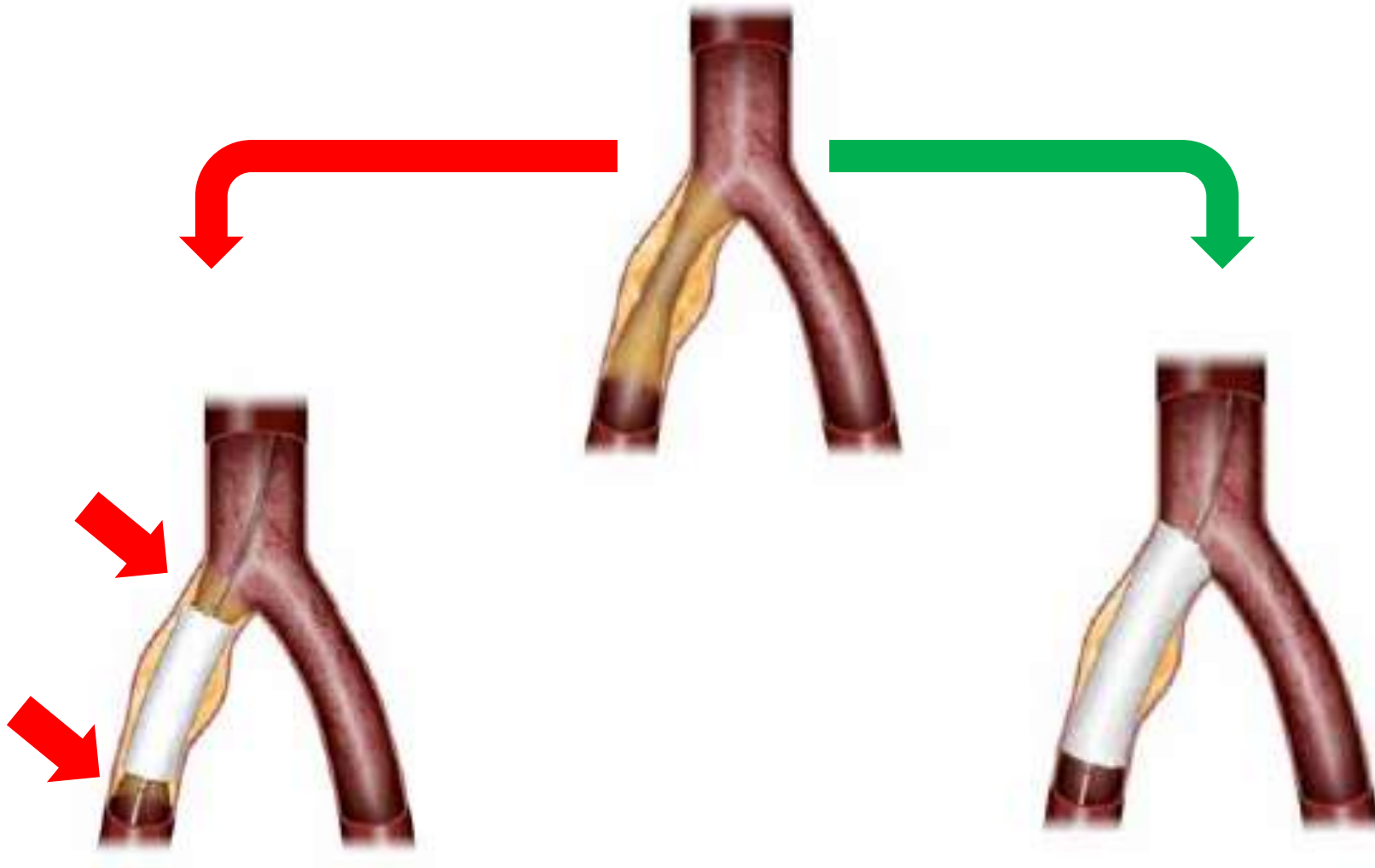


- Groupe stent couvert
 - Les restenose prédominent à l'extrémité du stent ou en dehors de celui ci

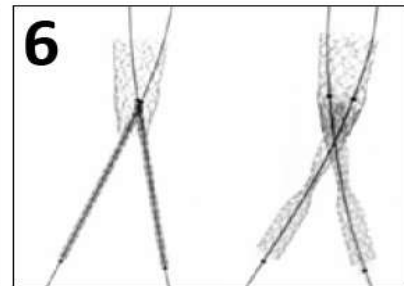
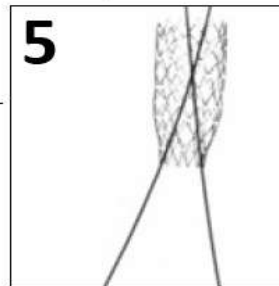
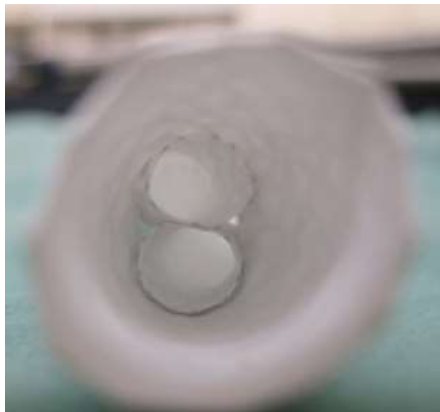
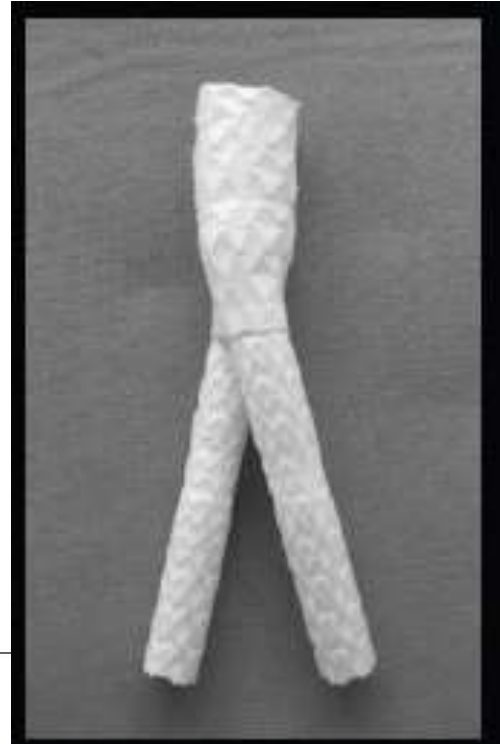
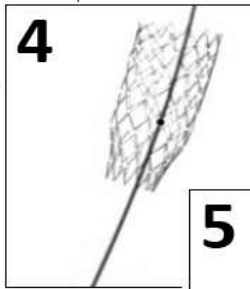
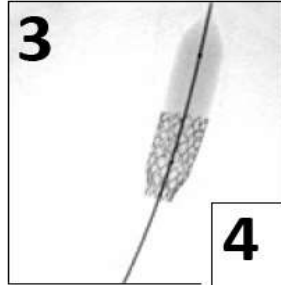
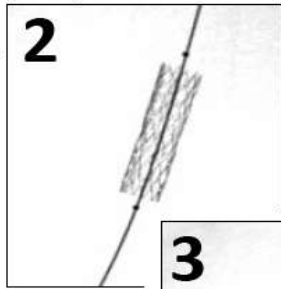
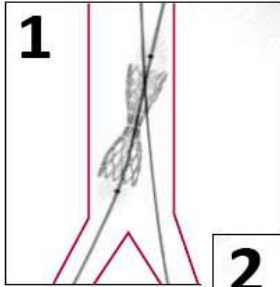




Recommendations



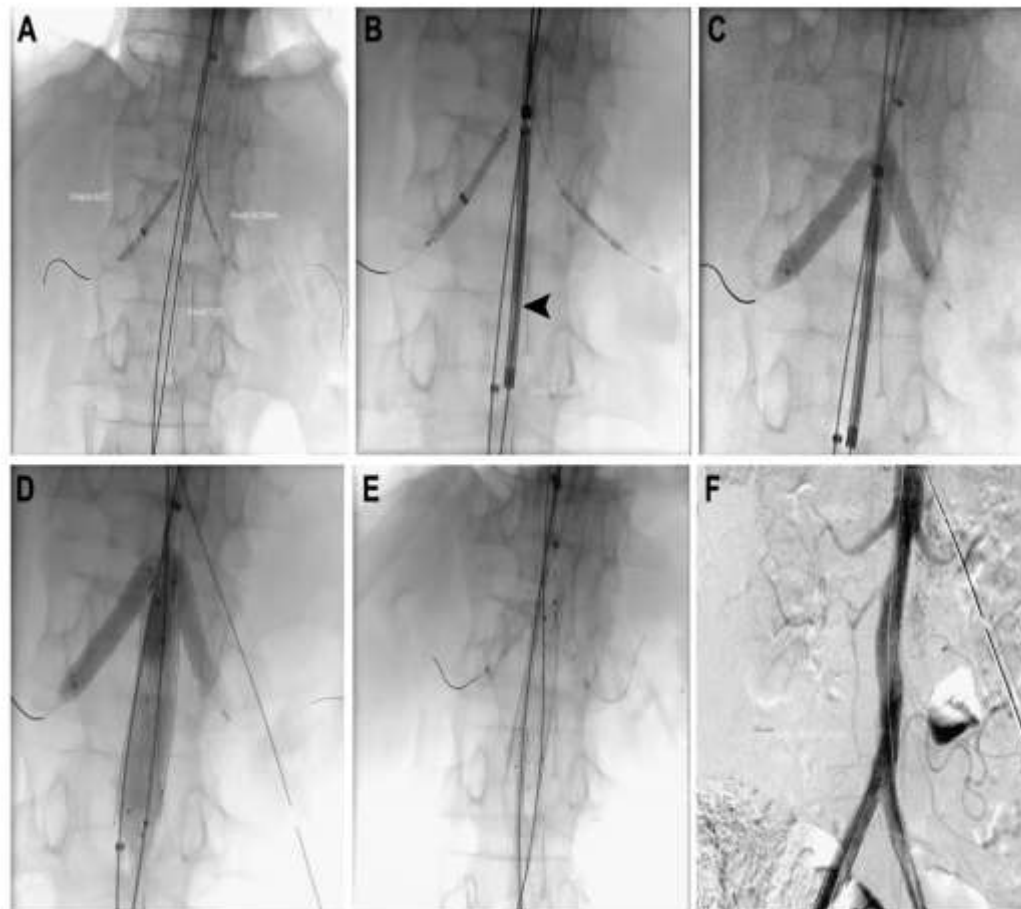
Technique de Govrerde



Chimney grafts preserve visceral flow and allow safe stenting of juxtarenal aortic occlusion

Adel Bin Jabr, MD, Björn Sonesson, MD, PhD, Bengt Lindblad, MD, PhD, Nuno Dias, MD, PhD, Tim Resch, MD, PhD, and Martin Malina, MD, PhD, *Malmö, Sweden*

(J Vasc Surg 2013;57:399-405.)

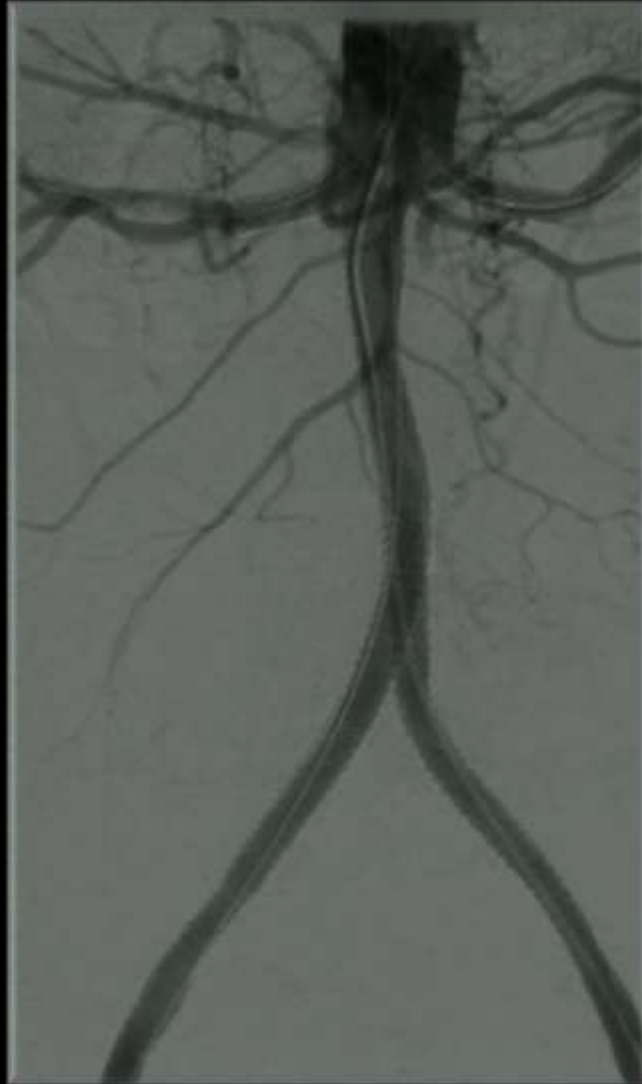


Chimney-CERAB



Case courtesy of Dr Peter Govverde, ZNA, Antwerp, Belgium

Chimney-CERAB



Case courtesy of Dr Peter Govverde, ZNA, Antwerp, Belgium

Résultats

- Succès technique immédiat 90-100%
 - Il est fonction de l'extension des lésions
- Les facteurs de risques de thrombose
 - Occlusions longues de l'artère iliaque externe
 - Le sexe féminin
 - Les vaisseaux de petite taille
 - Les lésions calcifiées de façon circonférentielle
- La perméabilité primaire
 - À 1 an 70% à 100%
 - À 5 ans 60 à 85%
- La perméabilité secondaire
 - À 1 an 90 à 100%
 - À 5 ans 80 à 95%



La Chirurgie directe

- La chirurgie garde une place dans le traitement de la pathologie occlusive aorto-iliaque
- Les paramètres à prendre en compte pour l'indication :
 - Les antécédents de chirurgie (endo)vasculaire à cet étage
 - Le risque opératoire du patient
- Les considérations anatomiques (TASC) sur le scanner :
 - Présence de lésions anévrysmales combinées aux lésions occlusives
 - La sévérité des lésions et leur extension



Résultats de la chirurgie directe pour lésions occlusives aorto-iliaques

- Gold/old standard
- Mortalité <3%
- La morbidité 10 à 15 % avec des complications :
 - Cardiaques
 - Pulmonaires
 - Infectieuses
 - Digestives
 - De voie d'abord
- Perméabilité 85 à 90 % à 5 et 10 ans

Meta-analyse

- JE Indes, *journal of endovascular therapy* 2013

	PABF N=3733	ENDO N=1625	P
Durée de séjour	13	4	0.001
Complications	18%	13.4%	0.001
Mortalité à 30 jours	2,6%	0,7%	0,001
Perméabilité primaire à 5 ans	86%	71,4%	0,001

Complications à long terme de la chirurgie aorto-iliaque

– Eventrations

- Incidence: 11%
- Complications: 24-30%
- Récidive: 2-10%

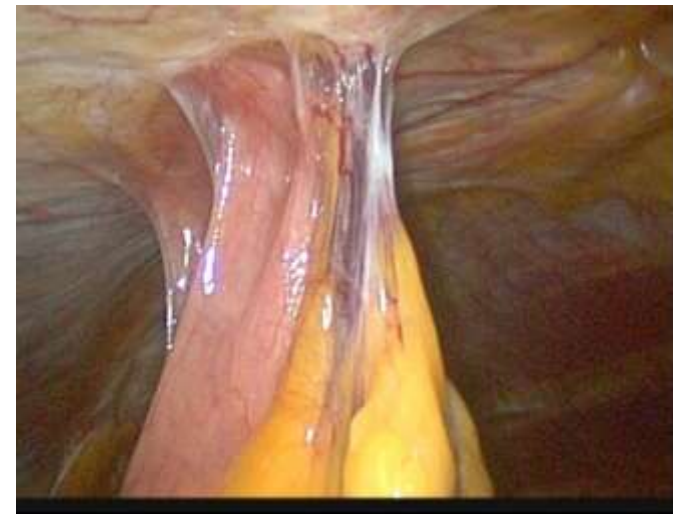
– Brides adhérentielles

- Incidence: 67-93%
- Occlusion intestinale

– Infections de prothèse aortique, fistules aorto-digestives, para-entéro-prothétiques...

- Incidence: 0.5-5%
- Mortalité: 50%

– Occlusion de jambage, faux anévrisme



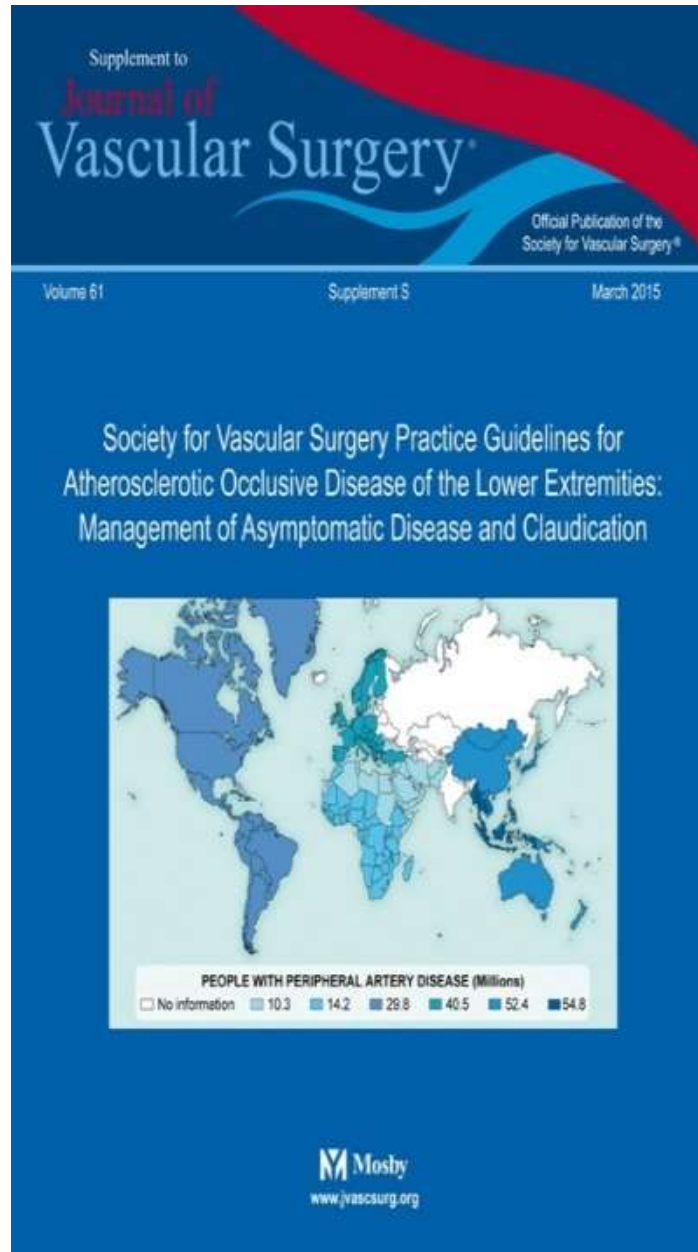
Les Reconstructions Extra-Anatomiques (pontage axillo-fémoral)

- Pour les patients :
 - Avec des lésions extensives
 - A haut risque chirurgical
 - Le plus souvent au stade d'ischémie critique
- Leur utilisation chez le claudicant devrait se limiter :
 - Symptomatologie très invalidante
 - Abdomen hostile
 - Echecs de revascularisation endovasculaire et directe
 - Finalement, situation très rare

Les Interventions Hybrides

- Elles associent le plus souvent
 - Réfection chirurgicale du trépied fémoral
 - Angioplastie + stenting aorto-iliaque
- Succès technique 99 à 100%
- Perméabilité primaire
 - A 3 ans 90%
- Perméabilité secondaire
 - A 3 ans 98 à 100%
- Réduction du risque opératoire par rapport au pontage aorto-fémoral

Les Recommandations



ESVS - SVS- ESC GUIDELINES FOR MANAGEMENT OF AORTOILIAC OCCLUSIVE DISEASE UPDATE 2015-2017

GLOBAL
VASCULAR GUIDELINES

ESVS, SVS, WFVS
Working Together to Improve Patient Care

Les Recommandations (1)

- Endovasculaire premier :
 - les lésions focales avec claudication
 - La plupart des patients avec des lésions occlusives de l'artère iliaque primitive ou externe
- Les stents
 - Usage sélectif des stents couverts ou non en raison de l'amélioration du succès technique et de la perméabilité qu'ils procurent
 - Utilisation de stents couverts pour les lésions calcifiées sévères ou avec lésions anévrysmales à cause du risque de rupture

Les Recommandations (2)

- Pour les patients avec des lésions sévères, l'approche endovasculaire ou chirurgicale première est recommandée, mais les procédures endovasculaires pouvant gêner une chirurgie secondaire sont à éviter
- Chez tous les patients, la fémorale commune doit être examinée, et si elle est sténosée la chirurgie est recommandée
- Chez les patients avec des lésions iliaques et fémorales communes, la chirurgie hybride est recommandée :
 - Endartérectomie fémorale
 - Angioplastie iliaque

Les Recommandations (3)

- Les reconstructions chirurgicales directes sont recommandées chez les patients avec un risque opératoire raisonnable, avec des lésions diffuses non accessibles à un traitement endovasculaire, ou après une ou plusieurs tentatives endovasculaires
- Les reconstructions chirurgicales directes sont recommandées chez les patients présentant une association de lésions occlusives et anévrysmales associées
- Les patients jeunes (âge <50 ans) doivent être informés du risque d'aggravation de la symptomatologie

CONCLUSION

Essor considérable du traitement endovasculaire (stents couverts,...)

La chirurgie directe garde quelques indications

Merci de votre attention

